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1. A positive type photosensitive image-forming material for use with an infrared laser, comprising:

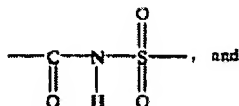
a substrate;

a layer (A) containing not less than 50% by weight of a copolymer which contains, as a copolymerization component, not less than 10% by mol of at least one of the following monomers (a-1) to (a-3):

(a-1) a monomer having in the molecule a sulfonamide group wherein at least one hydrogen atom is linked to a nitrogen atom,

(a-2) a monomer having in the molecule an active imino group represented by the following general formula (I):

(I)



(a-3) a monomer selected from acrylamide, methacrylamide, acrylate, methacrylate and hydroxystyrene, which respectively have a phenolic hydroxyl group; and

a layer (B) containing not less than 50% by weight of an aqueous alkali solution-soluble resin having a phenolic hydroxyl group, said layer (B) being laminated directly on said layer (A) formed on said substrate, wherein at least said layer (B) contains at least one compound which generates heat upon absorbing light.

2. A positive type photosensitive image-forming material for use with an infrared laser according to claim 1, wherein the monomer (a-1) is selected from low-molecular weight compounds having an acryloyl group, an allyl group or a vinyloxy group, and having a substituted or mono-substituted aminosulfonyl group or a substituted iminosulfonyl group.

3. A positive type photosensitive image-forming material for use with an infrared laser according to claim 1, wherein the monomer (a-2) is at least one compound selected from N-(p-toluenesulfonyl)methacrylamide and N-(p-toluenesulfonyl)acrylamide.

4. A positive type photosensitive image-forming material for use with an infrared laser according to claim 1, wherein

Development	
Exposure	Intensity (mJ/cm ²)
1	0
2	10
3	20
4	0
5	—
Development	—
6	—
Development	—

the monomer (a-3) is at least one compound selected from N-(4-hydroxyphenyl)acrylamide, N-(4-hydroxyphenyl) methacrylamide, o-hydroxyphenyl acrylate, m-hydroxyphenyl acrylate, p-hydroxyphenyl acrylate, o-hydroxyphenyl methacrylate, m-hydroxyphenyl methacrylate, p-hydroxyphenyl methacrylate, o-hydroxystyrene, m-hydroxystyrene and p-hydroxystyrene.

5. A positive type photosensitive image-forming material for use with an infrared laser according to claim 1, wherein a coated amount of said layer (A) is in the range from 0.5 to 4.0 g/m².

6. A positive type photosensitive image-forming material for use with an infrared laser according to claim 1, wherein the copolymer contained in said layer (A) has a weight-average molecular weight of not less than 2000 and a number-average molecular weight of not less than 500.

7. A positive type photosensitive image-forming material for use with an infrared laser according to claim 1, wherein a degree of molecular dispersion (weight-average molecular weight/number-average molecular weight) of the copolymer contained in said layer (A) is from 1.1 to 10.

8. (currently amended) A positive type photosensitive image-forming material for use with an infrared laser according to claim 1, wherein a material, which is thermally decomposable and, in a [non-decomposable] non-decomposed state, is capable of substantially lowering the solubility of the copolymer, which is an aqueous alkali-soluble polymer compound, is used in combination with the copolymer as the composition forming the layer (A).

9. (currently amended) A positive type photosensitive image-forming material for use with an infrared laser according to claim 8, wherein the [substance] material, which is thermally decomposable and, in the [non-decomposable] non-decomposed state, is capable of substantially lowering the solubility of the aqueous alkali-soluble polymer compound, is selected from onium salt, quinonediazide compound, aromatic sulfone compound and aromatic sulfonate compound.

10. (currently amended) A positive [Apositive] type photosensitive image-forming material for use with an infrared laser according to claim 8, wherein the [substance] material, which is thermally decomposable and, in the [non-decomposable] non-decomposed state, is capable of substantially lowering the solubility of the aqueous

alkali-soluble polymer compound, contains at least one of [compound a] compound (II) or (III) represented by the following formula:



wherein R^1 and R^2 may be the same or different, and R^1 and R^2 each represent a substituted or non-substituted alkyl, alkenyl or aryl group.

11. A positive type photosensitive image-forming material for use with an infrared laser according to claim 1, wherein the resin contained in said layer (B) has a weight-average molecular weight of from 500 to 20000 and a number-average molecular weight of from 200 to 10000.

12. (currently amended): A positive type photosensitive image-forming material for use with an infrared laser according to claim 1, wherein the compound which generates heat upon absorbing light contained in said layer (B) is selected from the group consisting of [the] pigments [or the] and dyes.

13. (currently amended): A positive type photosensitive image-forming material for use with an infrared laser according to claim 1, wherein the aqueous alkali solution-soluble resin having a phenolic hydroxyl group contained in said layer (B) is a novolak resin selected from [novolak resins such as] the group consisting of phenol formaldehyde resin, m-cresol formaldehyde resin, p-cresol formaldehyde resin, m-/p-mixed cresol formaldehyde resin, and phenol/cresol [(any of m-, p- or m-/p-mixed)] mixed formaldehyde resin comprising at least one of m-cresol formaldehyde resin, p-cresol formaldehyde resin, and m-/p-mixed cresol formaldehyde resin.

14. A positive type photosensitive image-forming material for use with an infrared laser according to claim 1, wherein said substrate is made of a polyester film or an aluminum plate.

15. A positive type photosensitive image-forming material for use with an infrared laser according to claim 1, wherein the compound which generates heat upon absorbing light has a light absorption region in the infrared region of 700 nm or more, and exhibits the ability to convert light to heat under light of a wavelength within this region.

16. A positive type photosensitive image-forming material for use with an infrared laser according to claim 1, wherein a light source to be used is one of a solid state laser and semiconductor.

17. A positive type photosensitive image-forming material for use with an infrared laser according to claim 1, wherein said layer (A) and said layer (B) are infrared sensitive.

18. A positive type photosensitive image-forming material for use with an infrared laser according to claim 1, wherein said material can be exposed to white light and thereafter remain useful as an image-forming material.

19. A positive type photosensitive image-forming material for use with an infrared laser, comprising:

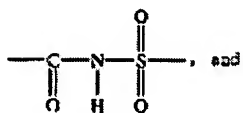
a substrate;

a layer (A) containing not less than 50% by weight of a copolymer which contains, as a copolymerization component, not less than 10% by mol of at least one of the following monomers (a-1) to (a-3):

(a-1) a monomer having in the molecule a sulfonamide group wherein at least one hydrogen atom is linked to a nitrogen atom,

(a-2) a monomer having in the molecule an active imino group represented by the following general formula (I):

(I)



(a-3) a monomer selected from acrylamide, methacrylamide, acrylate, methacrylate and hydroxystyrene, which respectively have a phenolic hydroxyl group; and

a layer (B) containing not less than 50% by weight of an aqueous alkali solution-soluble resin having a phenolic hydroxyl group, said layer (B) being formed directly on said layer (A), wherein at least said layer (B) contains at least one compound which generates heat upon absorbing light.

20. (currently amended): A positive type photosensitive image-forming material for use with an infrared laser, comprising:

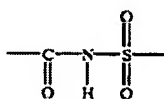
a substrate;

a layer (A) containing not less than 50% by weight of a copolymer which contains, as a copolymerization component, not less than 10% by mol of at least one of the following monomers (a-1) to (a-3):

(a-1) a monomer having in the molecule a sulfonamide group wherein at least one hydrogen atom is linked to a nitrogen atom,

(a-2) a monomer having in the molecule an active imino group represented by the following general formula (I):

(I)



, and

(a-3) a monomer selected from acrylamide, methacrylamide, acrylate, methacrylate and hydroxystyrene, which respectively have a phenolic hydroxyl group; and

a layer (B) containing not less than 50% by weight of an aqueous alkali solution-soluble resin having a phenolic hydroxyl group, said layer (A) and said layer (B) being laminated on said substrate in that order, wherein at least said layer (B) contains at least one compound which generates heat upon absorbing light, and wherein said material can be [exosed] exposed to white light and thereafter remain useful as an image-forming material.

21. A positive-type photosensitive image-forming material for use with an infrared laser according to claim 17, wherein the compound which generates heat upon absorbing light contained in said layer (B) is selected from the group consisting of pigments and dyes; and wherein said layer (A) further comprises a material, which is thermally decomposable and, in a non-decomposed state, is capable of substantially lowering the solubility of the copolymer in the layer (A), said copolymer being an aqueous alkali-soluble polymer compound.

22. A positive-type photosensitive image-forming material for use with an infrared laser according to claim 21, wherein the aqueous alkali solution-soluble resin of layer (B) is soluble in a solvent which does not dissolve the copolymer of layer (A).

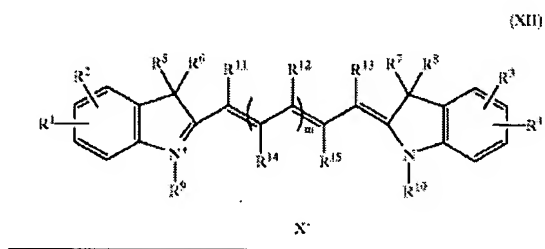
23. A positive-type photosensitive image-forming material for use with an infrared laser according to claim 21, wherein at least one of layers (A) and (B) further contains an oil-soluble dye or basic dye selected from the group consisting of Oil Yellow #101, Oil Yellow #103, Oil Pink #312, Oil Green BG, Oil Blue BOS, Oil Blue #603, Oil Black BY, Oil Black BS, Oil Black T-505, Victoria Pure Blue, Crystal Violet, Methyl Violet, Ethyl Violet, Rhodamine B, Malachite Green, and Methylene Blue.

24. A positive-type photosensitive image-forming material for use with an infrared laser according to claim 23, wherein said oil-soluble dye or basic dye is selected from the group consisting of Victoria Pure Blue, Crystal Violet, Methyl Violet, and Ethyl Violet.

25. A positive-type photosensitive image-forming material for use with an infrared laser according to claim 21, wherein said material which generates heat upon absorbing light in layer (B) is an infrared-absorbing dye compound.

26. A positive-type photosensitive image-forming material for use with an infrared laser according to claim 25, wherein said infrared-absorbing dye compound in layer (B) is a cyanine dye compound.

27. A positive-type photosensitive image-forming material for use with an infrared laser according to claim 26, wherein said cyanine dye compound in layer (B) is represented by formula (XII):



wherein:

R¹ to R⁴ each independently represents an alkyl group, an alkenyl group, an alkoxy group, a cycloalkyl group or an aryl group, each having from 1 to 12 carbon atoms, each of which is unsubstituted or substituted with a halogen atom, a carbonyl group, a nitro group, a nitril group, a sulfonyl group, a carboxyl group, a carboxylate group, or a sulfonate group; and R¹ and R², R³ and R⁴ may be linked to form a ring;

R⁵ to R¹⁰ each independently represents an alkyl group having 1 to 12 carbon atoms or an aryl group having 1 to 12 carbon atoms, each of which is unsubstituted or

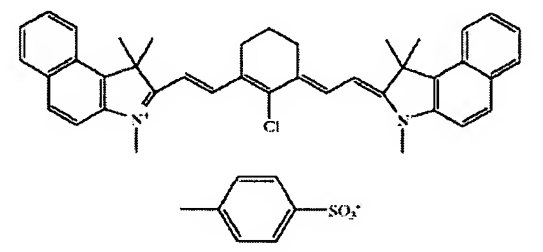
substituted with a halogen atom, a carbonyl group, a nitro group, a nitril group, a sulfonyl group, a carboxyl group, a carboxylate group, or a sulfonate group;

R¹¹ to R¹³ each independently represents a hydrogen atom, a halogen atom or an alkyl group having 1 to 8 carbon atoms, each of which is unsubstituted or substituted with a halogen atom, a carbonyl group, a nitro group, a nitrile group, a sulfonyl group, a carboxyl group, a carboxylate group, or a sulfonate group; R¹² may be linked to R¹¹ or R¹³ to form a ring; m is an integer of 1 to 8, and when m is 2 or more, plural R¹² groups, which may be the same or different, may be linked to form a ring;

R¹⁴ and R¹⁵ each independently represents a hydrogen atom, a halogen atom or an alkyl group having 1 to 8 carbon atoms, each of which is unsubstituted or substituted with a halogen atom, a carbonyl group, a nitro group, a nitrile group, a sulfonyl group, a carboxyl group, a carboxylate group, or a sulfonate group; R¹⁴ may be linked to R¹⁵ to form a ring; m is an integer of 1 to 8, and when m is 2 or more, plural R¹⁴ groups, which may be the same or different, may be linked to form a ring; and

X⁻ represents an anion.

28. A positive-type photosensitive image-forming material for use with an infrared laser according to claim 27, wherein said cyanine dye compound in layer (B) is cyanine dye A represented by the following formula:



29. A positive-type photosensitive image-forming material for use with an infrared laser according to claim 27, wherein the aqueous alkali solution-soluble resin of layer (B) is soluble in a solvent which does not dissolve the copolymer of layer (A).

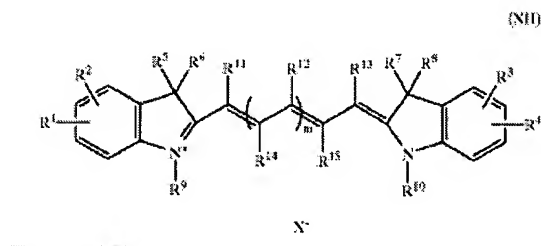
30. A positive-type photosensitive image-forming material for use with an infrared laser according to claim 27, wherein at least one of layers (A) and (B) further contains an oil-soluble dye or basic dye selected from the group consisting of Oil Yellow #101, Oil Yellow #103, Oil Pink #312, Oil Green BG, Oil Blue BOS, Oil Blue #603, Oil Black BY, Oil Black BS, Oil Black T-505, Victoria Pure Blue, Crystal Violet, Methyl Violet, Ethyl Violet, Rhodamine B, Malachite Green, and Methylene Blue.

31. A positive-type photosensitive image-forming material for use with an infrared laser according to claim 30, wherein said oil-soluble dye or basic dye is selected from the group consisting of Victoria Pure Blue, Crystal Violet, Methyl Violet, and Ethyl Violet.

32. A positive-type photosensitive image-forming material for use with an infrared laser according to claim 21, wherein said infrared-sensitive layer (A) contains an infrared-absorbing dye compound.

33. A positive-type photosensitive image-forming material for use with an infrared laser according to claim 32, wherein said infrared-absorbing dye compound in layer (A) is a cyanine dye compound.

34. A positive-type photosensitive image-forming material for use with an infrared laser according to claim 33, wherein said cyanine dye compound in layer (A) is represented by formula (XII):



wherein:

R¹ to R⁴ each independently represents an alkyl group, an alkenyl group, an alkoxy group, a cycloalkyl group or an aryl group, each having from 1 to 12 carbon atoms, each of which is unsubstituted or substituted with a halogen atom, a carbonyl group, a nitro group, a nitril group, a sulfonyl group, a carboxyl group, a carboxylate group, or a sulfonate group; and R¹ and R², R³ and R⁴ may be linked to form a ring;

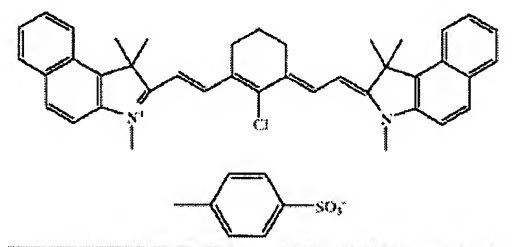
R⁵ to R¹⁰ each independently represents an alkyl group having 1 to 12 carbon atoms or an aryl group having 1 to 12 carbon atoms, each of which is unsubstituted or substituted with a halogen atom, a carbonyl group, a nitro group, a nitril group, a sulfonyl group, a carboxyl group, a carboxylate group, or a sulfonate group;

R¹¹ to R¹³ each independently represents a hydrogen atom, a halogen atom or an alkyl group having 1 to 8 carbon atoms, each of which is unsubstituted or substituted with a halogen atom, a carbonyl group, a nitro group, a nitrile group, a sulfonyl group, a carboxyl group, a carboxylate group, or a sulfonate group; R¹² may be linked to R¹¹ or R¹³ to form a ring; m is an integer of 1 to 8, and when m is 2 or more, plural R¹² groups, which may be the same or different, may be linked to form a ring;

R^{14} and R^{15} each independently represents a hydrogen atom, a halogen atom or an alkyl group having 1 to 8 carbon atoms, each of which is unsubstituted or substituted with a halogen atom, a carbonyl group, a nitro group, a nitrile group, a sulfonyl group, a carboxyl group, a carboxylate group, or a sulfonate group; R^{14} may be linked to R^{15} to form a ring; m is an integer of 1 to 8, and when m is 2 or more, plural R^{14} groups, which may be the same or different, may be linked to form a ring; and

X^- represents an anion.

35. A positive-type photosensitive image-forming material for use with an infrared laser according to claim 34, wherein said cyanine dye compound in layer (B) is cyanine dye A represented by the following formula:



36. A positive-type photosensitive image-forming material for use with an infrared laser according to claim 34, wherein the aqueous alkali solution-soluble resin of layer (B) is soluble in a solvent which does not dissolve the copolymer of layer (A).

37. A positive-type photosensitive image-forming material for use with an infrared laser according to claim 34, wherein at least one of layers (A) and (B) further contains an oil-soluble dye or basic dye selected from the group consisting of Oil Yellow

#101, Oil Yellow #103, Oil Pink #312, Oil Green BG, Oil Blue BOS, Oil Blue #603, Oil Black BY, Oil Black BS, Oil Black T-505, Victoria Pure Blue, Crystal Violet, Methyl Violet, Ethyl Violet, Rhodamine B, Malachite Green, and Methylene Blue.

38. A positive-type photosensitive image-forming material for use with an infrared laser according to claim 37, wherein said oil-soluble dye or basic dye is selected from the group consisting of Victoria Pure Blue, Crystal Violet, Methyl Violet, and Ethyl Violet.

39. A positive-type photosensitive image-forming material for use with an infrared laser according to claim 21, wherein said substrate comprises a polyester film or an aluminum plate.

40. A positive-type photosensitive image-forming material for use with an infrared laser according to any one of claims 21-39, wherein the aqueous alkali solution-soluble resin having a phenolic hydroxyl group contained in said layer (B) is a novolak resin.

41. A positive-type photosensitive image-forming material for use with an infrared laser according to claim 40, wherein the novolak resin is selected from the group consisting of phenol formaldehyde resin, m-cresol formaldehyde resin, p-cresol formaldehyde resin, m-/p-mixed cresol formaldehyde resin, and phenol/cresol mixed formaldehyde resin comprising at least one of m-cresol formaldehyde resin, p-cresol formaldehyde resin, and m-/p-mixed cresol formaldehyde resin.

42. A positive-type photosensitive image-forming material for use with an infrared laser according to claim 40, wherein the material, which is thermally decomposable and, in the non-decomposed state, is capable of substantially lowering the solubility of the aqueous alkali-soluble polymer compound, is contained in at least layer (A) and is selected from onium salt, quinonediazide compound, aromatic sulfone compound, and aromatic sulfonate compound.

43. A positive-type photosensitive image-forming material for use with an infrared laser according to claim 42, wherein the material, which is thermally decomposable and, in the non-decomposed state, is capable of substantially lowering the solubility of the aqueous alkali-soluble polymer compound, is an ammonium salt.

44. A positive-type photosensitive image-forming material for use with an infrared laser according to claim 40, wherein at least layer (A) contains an oil-soluble dye or basic dye which is capable of substantially lowering the solubility of the aqueous alkali-soluble polymer compound and is selected from the group consisting of Oil Yellow #101, Oil Yellow #103, Oil Pink #312, Oil Green BG, Oil Blue BOS, Oil Blue #603, Oil Black BY, Oil Black BS, Oil Black T-505, Victoria Pure Blue, Crystal Violet, Methyl Violet, Ethyl Violet, Rhodamine B, Malachite Green, and Methylene Blue.

45. A positive-type photosensitive image-forming material for use with an infrared laser according to claim 44, wherein said oil-soluble dye or basic dye is selected from the group consisting of Victoria Pure Blue, Crystal Violet, Methyl Violet, and Ethyl Violet.

46. A positive-type photosensitive image-forming material for use with an infrared laser according to claim 1,

wherein said substrate comprises an aluminum plate,

wherein in layer (A) the copolymer comprises monomer (a-1), and layer (A) further contains a cyanine dye and an oil-soluble dye or basic dye selected from the group consisting of Oil Yellow #101, Oil Yellow #103, Oil Pink #312, Oil Green BG, Oil Blue BOS, Oil Blue #603, Oil Black BY, Oil Black BS, Oil Black T-505, Victoria Pure Blue, Crystal Violet, Methyl Violet, Ethyl Violet, Rhodamine B, Malachite Green, and Methylene Blue, and

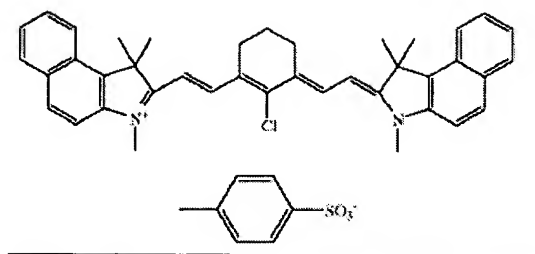
wherein in layer (B) the aqueous alkali solution-soluble resin is a novolak resin,
and

layer (B) further contains a cyanine dye and at least one onium salt.

47. A positive-type photosensitive image-forming material for use with an infrared laser according to claim 46, wherein said oil-soluble dye or basic dye is selected from the group consisting of Victoria Pure Blue, Crystal Violet, Methyl Violet, and Ethyl Violet.

48. A positive-type photosensitive image-forming material for use with an infrared laser according to claim 46,

wherein in layers (A) and (B) the cyanine dye is cyanine dye A represented by the following formula:



the oil soluble dye or basic dye in layer (A) is Ethyl Violet, and

the onium salt in layer (B) is an ammonium salt.

49. A positive-type photosensitive image-forming material for use with an infrared laser, comprising:

a substrate;

a layer (A) containing not less than 50% by weight of an aqueous alkali-soluble polymer compound containing, as a polymerization component, 10% by mol or more of a monomer effective to improve plate wear resistance and sensitivity, and a material which generates heat upon absorbing light, and

a layer (B) containing not less than 50% by weight of an aqueous alkali solution-soluble resin having a phenolic hydroxyl group, said layer (B) being laminated directly on said layer (A) formed on said substrate,

wherein at least said layer (B) contains at least one infrared-absorbing dye compound which generates heat upon absorbing light.

50. A positive-type photosensitive image-forming material for use with an infrared laser according to claim 49, wherein the aqueous alkali solution-soluble resin of layer (B) is soluble in a solvent which does not dissolve the copolymer of layer (A).

51. A positive-type photosensitive image-forming material for use with an infrared laser according to claim 49, wherein layer (B) further contains an oil-soluble dye or basic dye selected from the group consisting of Oil Yellow #101, Oil Yellow #103, Oil Pink #312, Oil Green BG, Oil Blue BOS, Oil Blue #603, Oil Black BY, Oil Black BS, Oil Black T-505, Victoria Pure Blue, Crystal Violet, Methyl Violet, Ethyl Violet, Rhodamine B, Malachite Green, and Methylene Blue.

52. A positive-type photosensitive image-forming material for use with an infrared laser according to claim 51, wherein said oil-soluble dye or basic dye is selected from the group consisting of Victoria Pure Blue, Crystal Violet, Methyl Violet, and Ethyl Violet.

53. A positive-type photosensitive image-forming material for use with an infrared laser according to claim 49, wherein said layer (A) and said layer (B) are infrared-sensitive.

54. A positive-type photosensitive image-forming material for use with an infrared laser according to claim 53, wherein said material which generates heat upon absorbing light in layer (A) is an infrared-absorbing dye compound.

55. A positive-type photosensitive image-forming material for use with an infrared laser according to claim 54, wherein the aqueous alkali solution-soluble resin of layer (B) is soluble in a solvent which does not dissolve the copolymer of layer (A).

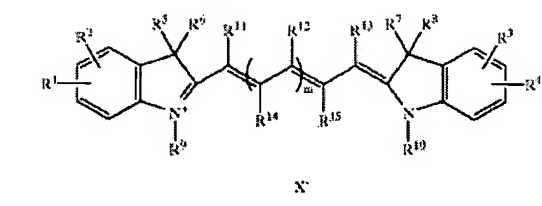
56. A positive-type photosensitive image-forming material for use with an infrared laser according to claim 54, wherein layer (B) further contains an oil-soluble dye or basic dye selected from the group consisting of Oil Yellow #101, Oil Yellow #103, Oil Pink #312, Oil Green BG, Oil Blue BOS, Oil Blue #603, Oil Black BY, Oil Black BS, Oil Black T-505, Victoria Pure Blue, Crystal Violet, Methyl Violet, Ethyl Violet, Rhodamine B, Malachite Green, and Methylene Blue.

57. A positive-type photosensitive image-forming material for use with an infrared laser according to claim 56, wherein said oil-soluble dye or basic dye is selected from the group consisting of Victoria Pure Blue, Crystal Violet, Methyl Violet, and Ethyl Violet.

58. A positive-type photosensitive image-forming material for use with an infrared laser according to claim 49, wherein said infrared-absorbing dye compound in layer (B) is a cyanine dye compound.

59. A positive-type photosensitive image-forming material for use with an infrared laser according to claim 58, wherein said cyanine dye compound in layer (B) is represented by formula (XII):

(XII)



wherein:

R¹ to R⁴ each independently represents an alkyl group, an alkenyl group, an alkoxy group, a cycloalkyl group or an aryl group, each having from 1 to 12 carbon atoms, each of which is unsubstituted or substituted with a halogen atom, a carbonyl group, a nitro group, a nitril group, a sulfonyl group, a carboxyl group, a carboxylate group, or a sulfonate group; and R¹ and R², R³ and R⁴ may be linked to form a ring;

R⁵ to R¹⁰ each independently represents an alkyl group having 1 to 12 carbon atoms or an aryl group having 1 to 12 carbon atoms, each of which is unsubstituted or substituted with a halogen atom, a carbonyl group, a nitro group, a nitril group, a sulfonyl group, a carboxyl group, a carboxylate group, or a sulfonate group;

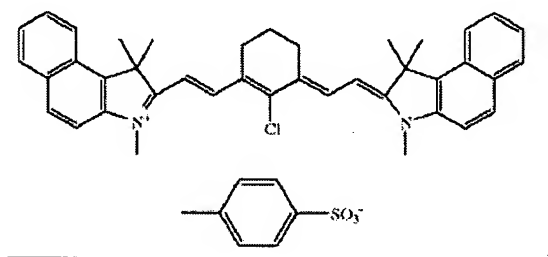
R¹¹ to R¹³ each independently represents a hydrogen atom, a halogen atom or an alkyl group having 1 to 8 carbon atoms, each of which is unsubstituted or substituted with a halogen atom, a carbonyl group, a nitro group, a nitrile group, a sulfonyl group, a carboxyl group, a carboxylate group, or a sulfonate group; R¹² may be linked to R¹¹ or R¹³ to form a ring; m is an integer of 1 to 8, and when m is 2 or more, plural R¹² groups, which may be the same or different, may be linked to form a ring;

R¹⁴ and R¹⁵ each independently represents a hydrogen atom, a halogen atom or an alkyl group having 1 to 8 carbon atoms, each of which is unsubstituted or substituted with a halogen atom, a carbonyl group, a nitro group, a nitrile group, a sulfonyl group, a carboxyl group, a carboxylate group, or a sulfonate group; R¹⁴ may be linked to R¹⁵ to

form a ring; m is an integer of 1 to 8, and when m is 2 or more, plural R¹⁴ groups, which may be the same or different, may be linked to form a ring; and

X⁻ represents an anion.

60. A positive-type photosensitive image-forming material for use with an infrared laser according to claim 59, wherein said cyanine dye compound in layer (B) is cyanine dye A represented by the following formula:



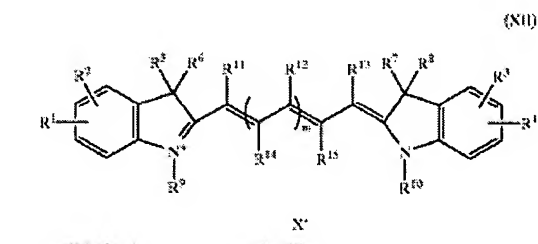
61. A positive-type photosensitive image-forming material for use with an infrared laser according to claim 59, wherein the aqueous alkali solution-soluble resin of layer (B) is soluble in a solvent which does not dissolve the copolymer of layer (A).

62. A positive-type photosensitive image-forming material for use with an infrared laser according to claim 59, wherein layer (B) further contains an oil-soluble dye or basic dye selected from the group consisting of Oil Yellow #101, Oil Yellow #103, Oil Pink #312, Oil Green BG, Oil Blue BOS, Oil Blue #603, Oil Black BY, Oil Black BS, Oil Black T-505, Victoria Pure Blue, Crystal Violet, Methyl Violet, Ethyl Violet, Rhodamine B, Malachite Green, and Methylene Blue.

63. A positive-type photosensitive image-forming material for use with an infrared laser according to claim 62, wherein said oil-soluble dye or basic dye is selected from the group consisting of Victoria Pure Blue, Crystal Violet, Methyl Violet, and Ethyl Violet.

64. A positive-type photosensitive image-forming material for use with an infrared laser according to claim 54, wherein said infrared-absorbing dye compound in layer (A) is a cyanine dye compound.

65. A positive-type photosensitive image-forming material for use with an infrared laser according to claim 64, wherein said cyanine dye compound in layer (A) is represented by formula (XII):



wherein:

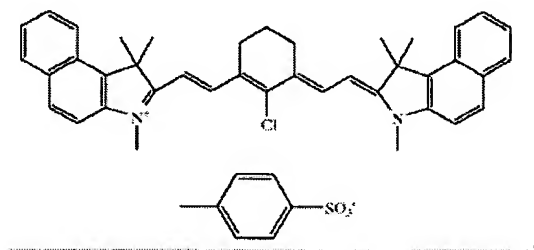
R¹ to R⁴ each independently represents an alkyl group, an alkenyl group, an alkoxy group, a cycloalkyl group or an aryl group, each having from 1 to 12 carbon atoms, each of which is unsubstituted or substituted with a halogen atom, a carbonyl group, a nitro group, a nitril group, a sulfonyl group, a carboxyl group, a carboxylate group, or a sulfonate group; and R¹ and R², R³ and R⁴ may be linked to form a ring;

R⁵ to R¹⁰ each independently represents an alkyl group having 1 to 12 carbon atoms or an aryl group having 1 to 12 carbon atoms, each of which is unsubstituted or

R¹¹ to R¹³ each independently represents a hydrogen atom, a halogen atom or an alkyl group having 1 to 8 carbon atoms, each of which is unsubstituted or substituted with a halogen atom, a carbonyl group, a nitro group, a nitrile group, a sulfonyl group, a carboxyl group, a carboxylate group, or a sulfonate group; R¹² may be linked to R¹¹ or R¹³ to form a ring; m is an integer of 1 to 8, and when m is 2 or more, plural R¹² groups, which may be the same or different, may be linked to form a ring;

R¹⁴ and R¹⁵ each independently represents a hydrogen atom, a halogen atom or an alkyl group having 1 to 8 carbon atoms, each of which is unsubstituted or substituted with a halogen atom, a carbonyl group, a nitro group, a nitrile group, a sulfonyl group, a carboxyl group, a carboxylate group, or a sulfonate group; R¹⁴ may be linked to R¹⁵ to form a ring; m is an integer of 1 to 8, and when m is 2 or more, plural R¹⁴ groups, which may be the same or different, may be linked to form a ring; and

66. A positive-type photosensitive image-forming material for use with an infrared laser according to claim 65, wherein said cyanine dye compound in layer (A) is cyanine dye A represented by the following formula:



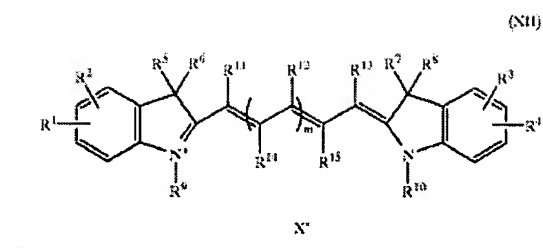
67. A positive-type photosensitive image-forming material for use with an infrared laser according to claim 65, wherein the aqueous alkali solution-soluble resin of layer (B) is soluble in a solvent which does not dissolve the copolymer of layer (A).

68. A positive-type photosensitive image-forming material for use with an infrared laser according to claim 65, wherein layer (B) further contains an oil-soluble dye or basic dye selected from the group consisting of Oil Yellow #101, Oil Yellow #103, Oil Pink #312, Oil Green BG, Oil Blue BOS, Oil Blue #603, Oil Black BY, Oil Black BS, Oil Black T-505, Victoria Pure Blue, Crystal Violet, Methyl Violet, Ethyl Violet, Rhodamine B, Malachite Green, and Methylene Blue.

69. A positive-type photosensitive image-forming material for use with an infrared laser according to claim 68, wherein said oil-soluble dye or basic dye is selected from the group consisting of Victoria Pure Blue, Crystal Violet, Methyl Violet, and Ethyl Violet.

70. A positive-type photosensitive image-forming material for use with an infrared laser according to claim 54, wherein said infrared-absorbing dye compounds in layers (A) and (B) are cyanine dye compounds.

71. A positive-type photosensitive image-forming material for use with an infrared laser according to claim 70, wherein said cyanine dye compounds are represented by formula (XII):



wherein:

R¹ to R⁴ each independently represents an alkyl group, an alkenyl group, an alkoxy group, a cycloalkyl group or an aryl group, each having from 1 to 12 carbon atoms, each of which is unsubstituted or substituted with a halogen atom, a carbonyl group, a nitro group, a nitril group, a sulfonyl group, a carboxyl group, a carboxylate group, or a sulfonate group; and R¹ and R², R³ and R⁴ may be linked to form a ring;

R⁵ to R¹⁰ each independently represents an alkyl group having 1 to 12 carbon atoms or an aryl group having 1 to 12 carbon atoms, each of which is unsubstituted or substituted with a halogen atom, a carbonyl group, a nitro group, a nitril group, a sulfonyl group, a carboxyl group, a carboxylate group, or a sulfonate group;

R¹¹ to R¹³ each independently represents a hydrogen atom, a halogen atom or an alkyl group having 1 to 8 carbon atoms, each of which is unsubstituted or substituted with a halogen atom, a carbonyl group, a nitro group, a nitrile group, a sulfonyl group, a carboxyl group, a carboxylate group, or a sulfonate group; R¹² may be linked to R¹¹ or R¹³ to form a ring; m is an integer of 1 to 8, and when m is 2 or more, plural R¹² groups, which may be the same or different, may be linked to form a ring;

R¹⁴ and R¹⁵ each independently represents a hydrogen atom, a halogen atom or an alkyl group having 1 to 8 carbon atoms, each of which is unsubstituted or substituted with a halogen atom, a carbonyl group, a nitro group, a nitrile group, a sulfonyl group, a carboxyl group, a carboxylate group, or a sulfonate group; R¹⁴ may be linked to R¹⁵ to

X^- represents an anion.

74. A positive-type photosensitive image-forming material for use with an infrared laser according to claim 71, wherein at least one of layers (A) and (B) further contains an oil-soluble dye or basic dye selected from the group consisting of Oil Yellow #101, Oil Yellow #103, Oil Pink #312, Oil Green BG, Oil Blue BOS, Oil Blue #603, Oil Black BY, Oil Black BS, Oil Black T-505, Victoria Pure Blue, Crystal Violet, Methyl Violet, Ethyl Violet, Rhodamine B, Malachite Green, and Methylene Blue.

75. A positive-type photosensitive image-forming material for use with an infrared laser according to claim 74, wherein said oil-soluble dye or basic dye is selected from the group consisting of Victoria Pure Blue, Crystal Violet, Methyl Violet, and Ethyl Violet.

76. A positive-type photosensitive image-forming material for use with an infrared laser, comprising:

a substrate;

a layer (A) containing not less than 50% by weight of an aqueous alkali-soluble polymer compound, and a material which generates heat upon absorbing light; and

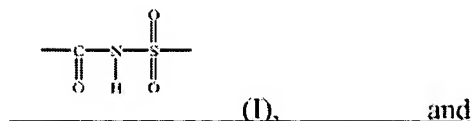
a layer (B) containing not less than 50% by weight of an aqueous alkali solution-soluble resin having a phenolic hydroxyl group, said layer (B) being laminated directly on said layer (A) formed on said substrate,

wherein at least said layer (B) contains at least one infrared-absorbing dye compound which generates heat upon absorbing light, and

wherein said aqueous alkali-soluble polymer compound is a copolymer which contains, as a copolymerization component, not less than 10% by mol of at least one of the following monomers (a-1) to (a-3):

(a-1) a monomer having in the molecule a sulfonamide group wherein at least one hydrogen atom is linked to a nitrogen atom,

(a-2) a monomer having in the molecule an active imino group represented by the following general formula (I):



(a-3) a monomer selected from acrylamide, methacrylamide, acrylate, methacrylate and hydroxystyrene, which respectively have a phenolic hydroxyl group.

77. A positive-type photosensitive image-forming material for use with an infrared laser according to claim 76, wherein the aqueous alkali solution-soluble resin of layer (B) is soluble in a solvent which does not dissolve the copolymer of layer (A).

78. A positive-type photosensitive image-forming material for use with an infrared laser according to claim 76, wherein layer (B) further contains an oil-soluble dye or basic dye selected from the group consisting of Oil Yellow #101, Oil Yellow #103, Oil Pink #312, Oil Green BG, Oil Blue BOS, Oil Blue #603, Oil Black BY, Oil Black BS, Oil Black T-505, Victoria Pure Blue, Crystal Violet, Methyl Violet, Ethyl Violet, Rhodamine B, Malachite Green, and Methylene Blue.

79. A positive-type photosensitive image-forming material for use with an infrared laser according to claim 78, wherein said oil-soluble dye or basic dye is selected from the group consisting of Victoria Pure Blue, Crystal Violet, Methyl Violet, and Ethyl Violet.

80. A positive-type photosensitive image-forming material for use with an infrared laser according to any one of claims 76-79, wherein layer (B) further contains a cyanine dye and at least one onium salt.

81. A positive type photosensitive image-forming material for use with an infrared laser according to claim 80, wherein the aqueous alkali solution-soluble resin having a phenolic hydroxyl group contained in said layer (B) is a novolak resin.

82-84. (canceled).

85. A positive-type photosensitive image-forming material for use with an infrared laser according to claim 49, wherein said substrate comprises a polyester film or an aluminum plate.

86. A positive-type photosensitive image-forming material for use with an infrared laser according to any one of claims 49-79 and 85, wherein the aqueous alkali solution-soluble resin having a phenolic hydroxyl group contained in said layer (B) is a novolak resin.

87. A positive-type photosensitive image-forming material for use with an infrared laser according to claim 86, wherein the novolak resin is selected from the group consisting of phenol formaldehyde resin, m-cresol formaldehyde resin, p-cresol formaldehyde resin, m-/p-mixed cresol formaldehyde resin, and phenol/cresol mixed

formaldehyde resin comprising at least one of m-cresol formaldehyde resin, p-cresol formaldehyde resin, and m-/p-mixed cresol formaldehyde resin.

88-91. (canceled).

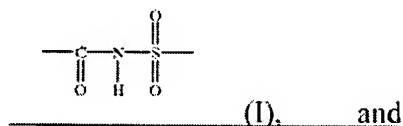
92. A photosensitive image-forming material for use with an infrared laser, comprising:

a substrate;

a layer (A) containing not less than 50% by weight of a copolymer which contains, as a copolymerization component, not less than 10% by mol of at least one of the following monomers (a-1) to (a-3):

(a-1) a monomer having in the molecule a sulfonamide group wherein at least one hydrogen atom is linked to a nitrogen atom,

(a-2) a monomer having in the molecule an active imino group represented by the following general formula (I):



(a-3) a monomer selected from acrylamide, methacrylamide, acrylate, methacrylate and hydroxystyrene, which respectively have a phenolic hydroxyl group; and

a layer (B) containing not less than 50% by weight of an aqueous alkali solution-soluble resin having a phenolic hydroxyl group, said layer (B) being laminated directly

on said layer (A) formed on said substrate, wherein at least said layer (B) contains at least one compound which generates heat upon absorbing light,

wherein the compound which generates heat upon absorbing light contained in said layer (B) is infrared-sensitive and selected from the group consisting of pigments and dyes,

wherein the image-forming material is a negative image-forming material, and

wherein the negative image-forming material further contains in at least one of layers (A) and (B) a material which crosslinks in the presence of an acid.

93. A photosensitive image-forming material for use with an infrared laser according to claim 92, wherein said layers (A) and (B) are infrared-sensitive.

94. A photosensitive image-forming material for use with an infrared laser according to claim 93, wherein the compound which generates heat upon absorbing light contained in said layer (B) is a cyanine dye compound.

95. A photosensitive image-forming material for use with an infrared laser according to claim 94, wherein layer (B) further contains an oil-soluble dye or basic dye selected from the group consisting of Oil Yellow #101, Oil Yellow #103, Oil Pink #312, Oil Green BG, Oil Blue BOS, Oil Blue #603, Oil Black BY, Oil Black BS, Oil Black T-505, Victoria Pure Blue, Crystal Violet, Methyl Violet, Ethyl Violet, Rhodamine B, Malachite Green, and Methylene Blue.

96. A photosensitive image-forming material for use with an infrared laser according to claim 95, wherein said oil-soluble dye or basic dye is selected from the group consisting of Victoria Pure Blue, Crystal Violet, Methyl Violet, and Ethyl Violet.

97. A photosensitive image-forming material for use with an infrared laser according to claim 95, wherein the aqueous alkali solution-soluble resin having a phenolic hydroxyl group contained in said layer (B) is a novolak resin.

98. (canceled).

99. A photosensitive image-forming material for use with an infrared laser according to claim 92, wherein the material which crosslinks in the presence of an acid is selected from the group consisting of (i) a compound having two or more hydroxymethyl groups or alkoxymethyl groups, epoxy groups or vinyl ether groups, which bond to a benzene ring, (ii) a compound having a N-hydroxymethyl group, N-alkoxymethyl group or N-acyloxymethyl group, and (iii) epoxy compounds.

100. A positive type photosensitive image-forming material for use with an infrared laser, comprising:

a substrate having thereon in this order:

a layer (A) containing not less than 50% by weight of a copolymer which contains, as a copolymerization component, 10% by mol or more of at least one monomer effective to improve plate wear resistance and sensitivity and at least one additional monomer selected from the group consisting of the following monomers (1) to (12):

- (1) an acrylate or methacrylate having an aliphatic hydroxyl group,
- (2) an alkyl acrylate,
- (3) an alkyl methacrylate,
- (4) an acrylamide or methacrylamide,
- (5) a vinyl ether,
- (6) a vinyl ester,
- (7) a styrene,
- (8) a vinyl ketone,
- (9) an olefin,
- (10) N-vinyl pyrrolidone, N-vinyl carbazole, 4-vinyl pyridine, acrylonitrile, or methacrylonitrile,
- (11) an unsaturated imide, and
- (12) an unsaturated carboxylic acid; and

a layer (B) containing not less than 50% by weight of a novolak resin,

wherein said layer (B) is laminated directly on said layer (A) formed on said substrate, and

wherein at least one of layer (A) and layer (B) comprises at least one compound which generates heat upon absorbing light.

101. A positive type photosensitive image-forming material for use with an infrared laser according to claim 100, wherein layer (B) comprises at least one compound which generates heat upon absorbing light.

102. A positive type photosensitive image-forming material for use with an infrared laser according to claim 100, wherein at least one of layer (A) and layer (B) comprises an oil-soluble dye or basic dye selected from the group consisting of Oil Yellow #101, Oil Yellow #103, Oil Pink #312, Oil Green BG, Oil Blue BOS, Oil Blue #603, Oil Black BY, Oil Black BS, Oil Black T-505, Victoria Pure Blue, Crystal Violet, Methyl Violet, Ethyl Violet, Rhodamine B, Malachite Green, and Methylene Blue.

103. A positive-type photosensitive image-forming material for use with an infrared laser according to claim 102, wherein said oil-soluble dye or basic dye is selected from the group consisting of Victoria Pure Blue, Crystal Violet, Methyl Violet, and Ethyl Violet.

104. A positive type photosensitive image-forming material for use with an infrared laser, comprising:

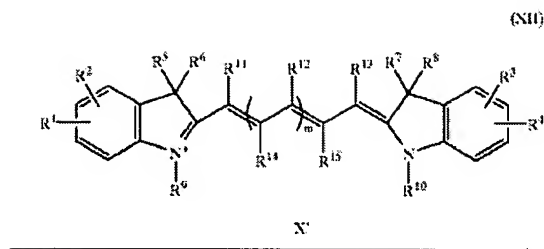
a substrate having thereon in this order:

a layer (A) containing not less than 50% by weight of an aqueous alkali-soluble polymer containing, as a polymerization component, 10% by mol or more of a monomer effective to improve plate wear resistance and sensitivity; and

a layer (B) containing not less than 50% by weight of an aqueous alkali solution-soluble resin having a phenolic hydroxyl group.

wherein said layer (B) is laminated directly on said layer (A) formed on said substrate, and

wherein at least one of the layer (A) and the layer (B) contains a compound which generates heat upon absorbing light that is represented by the formula (XII):



wherein:

R¹ to R⁴ each independently represents an alkyl group, an alkenyl group, an alkoxy group, a cycloalkyl group or an aryl group, each having from 1 to 12 carbon atoms, each of which is unsubstituted or substituted with a halogen atom, a carbonyl group, a nitro group, a nitril group, a sulfonyl group, a carboxyl group, a carboxylate group, or a sulfonate group; and R¹ and R², R³ and R⁴ may be linked to form a ring;

R⁵ to R¹⁰ each independently represents an alkyl group having 1 to 12 carbon atoms or an aryl group having 1 to 12 carbon atoms, each of which is unsubstituted or substituted with a halogen atom, a carbonyl group, a nitro group, a nitril group, a sulfonyl group, a carboxyl group, a carboxylate group, or a sulfonate group;

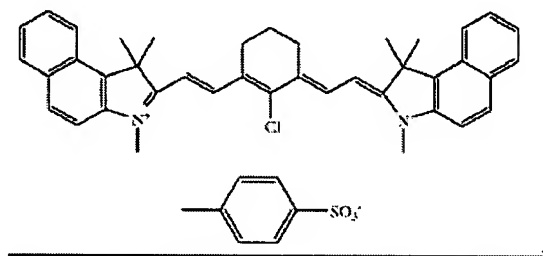
R¹¹ to R¹³ each independently represents a hydrogen atom, a halogen atom or an alkyl group having 1 to 8 carbon atoms, each of which is unsubstituted or substituted with a halogen atom, a carbonyl group, a nitro group, a nitrile group, a sulfonyl group, a carboxyl group, a carboxylate group, or a sulfonate group; R¹² may be linked to R¹¹ or R¹³ to form a ring; m is an integer of 1 to 8, and when m is 2 or more, plural R¹² groups, which may be the same or different, may be linked to form a ring;

R¹⁴ and R¹⁵ each independently represents a hydrogen atom, a halogen atom or an alkyl group having 1 to 8 carbon atoms, each of which is unsubstituted or substituted with a halogen atom, a carbonyl group, a nitro group, a nitrile group, a sulfonyl group, a carboxyl group, a carboxylate group, or a sulfonate group; R¹⁴ may be linked to R¹⁵ to

form a ring; m is an integer of 1 to 8, and when m is 2 or more, plural R¹⁴ groups, which may be the same or different, may be linked to form a ring; and

X⁻ represents an anion.

105. A positive-type photosensitive image-forming material for use with an infrared laser according to claim 104, wherein said compound which generates heat upon absorbing light is present in layer (B) and is cyanine dye A represented by the following formula:



106. A positive type photosensitive image-forming material for use with an infrared laser, comprising:

a substrate having thereon in this order:

a layer (A) containing not less than 50% by weight of an aqueous alkali-soluble polymer containing, as a polymerization component, 10% by mol or more of a monomer effective to improve plate wear resistance and sensitivity, and

a layer (B) containing not less than 50% by weight of an aqueous alkali solution-soluble resin having a phenolic hydroxyl group,

wherein the layer (B) contains a surfactant.

wherein at least one of layer (A) and layer (B) comprises at least one compound which generates heat upon absorbing light, and

wherein said layer (B) is laminated directly on said layer (A) formed on said substrate.

107. A positive type photosensitive image-forming material for use with an infrared laser according to claim 106, wherein layer (B) comprises at least one compound which generates heat upon absorbing light.

108. A positive type photosensitive image-forming material for use with an infrared laser according to claim 106, wherein at least one of layer (A) and layer (B) comprises an oil-soluble dye or basic dye selected from the group consisting of Oil Yellow #101, Oil Yellow #103, Oil Pink #312, Oil Green BG, Oil Blue BOS, Oil Blue #603, Oil Black BY, Oil Black BS, Oil Black T-505, Victoria Pure Blue, Crystal Violet, Methyl Violet, Ethyl Violet, Rhodamine B, Malachite Green, and Methylene Blue.

109. A positive-type photosensitive image-forming material for use with an infrared laser according to claim 108, wherein said oil-soluble dye or basic dye is selected from the group consisting of Victoria Pure Blue, Crystal Violet, Methyl Violet, and Ethyl Violet.

110. A positive type photosensitive image-forming material for use with an infrared laser, comprising:

a substrate having thereon in this order:

a layer (A) containing not less than 50% by weight of a copolymer which contains, as a copolymerization component, 10% by mol or more of at least one monomer effective to improve plate wear resistance and sensitivity and selected from an unsaturated imide, methacrylamide, and an unsaturated carboxylic acid; and

a layer (B) containing not less than 50% by weight of a novolak resin;

wherein said layer (A) comprises a cyanine dye and said layer (B) comprises an Ethyl Violet dye, and

wherein said layer (B) is laminated directly on said layer (A) formed on said substrate.

111. A positive type photosensitive image-forming material for use with an infrared laser, which is produced by a method comprising the steps of:

providing a substrate;

coating on the substrate a layer (A) containing not less than 50% by weight of an aqueous alkali-soluble polymer containing, as a polymerization component, 10% by mol or more of a monomer effective to improve plate wear resistance and sensitivity; and

coating a layer (B) containing not less than 50% by weight of an aqueous alkali solution-soluble resin having a phenolic hydroxyl group on the layer (A) using a solvent which does not dissolve the layer (A),

wherein at least one of layer (A) and layer (B) comprises at least one compound which generates heat upon absorbing light, and

wherein the layer (B) is laminated directly on the layer (A) formed on the substrate.

112. A positive type photosensitive image-forming material for use with an infrared laser according to claim 111, wherein layer (B) comprises at least one compound which generates heat upon absorbing light.

113. A positive type photosensitive image-forming material for use with an infrared laser according to claim 111, wherein at least one of layer (A) and layer (B) comprises an oil-soluble dye or basic dye selected from the group consisting of Oil Yellow #101, Oil Yellow #103, Oil Pink #312, Oil Green BG, Oil Blue BOS, Oil Blue #603, Oil Black BY, Oil Black BS, Oil Black T-505, Victoria Pure Blue, Crystal Violet, Methyl Violet, Ethyl Violet, Rhodamine B, Malachite Green, and Methylene Blue.

114. A positive-type photosensitive image-forming material for use with an infrared laser according to claim 113, wherein said oil-soluble dye or basic dye is selected from the group consisting of Victoria Pure Blue, Crystal Violet, Methyl Violet, and Ethyl Violet.

115. A positive type photosensitive image-forming material for use with an infrared laser, comprising:

a substrate having thereon in this order:

a layer (A) containing not less than 50% by weight of an aqueous alkali-soluble polymer containing, as a polymerization component, 10% by mol or more of a monomer effective to improve plate wear resistance and sensitivity; and

a layer (B) containing not less than 50% by weight of an aqueous alkali solution-soluble resin having a phenolic hydroxyl group;

wherein at least one of layer (A) and layer (B) comprises at least one compound which generates heat upon absorbing light,

wherein said layer (B) is laminated directly on said layer (A) formed on said substrate, and

wherein a coated amount of the layer (A) is from 1.4 to 4.0 g/m².

116. A positive type photosensitive image-forming material for use with an infrared laser according to claim 115, wherein layer (B) comprises at least one compound which generates heat upon absorbing light.

117. A positive type photosensitive image-forming material for use with an infrared laser according to claim 115, wherein at least one of layer (A) and layer (B) comprises an oil-soluble dye or basic dye selected from the group consisting of Oil Yellow #101, Oil Yellow #103, Oil Pink #312, Oil Green BG, Oil Blue BOS, Oil Blue #603, Oil Black BY, Oil Black BS, Oil Black T-505, Victoria Pure Blue, Crystal Violet, Methyl Violet, Ethyl Violet, Rhodamine B, Malachite Green, and Methylene Blue.

118. A positive-type photosensitive image-forming material for use with an infrared laser according to claim 117, wherein said oil-soluble dye or basic dye is selected from the group consisting of Victoria Pure Blue, Crystal Violet, Methyl Violet, and Ethyl Violet.

119. A positive type photosensitive image-forming material for use with an infrared laser, which is produced by a method comprising the steps of

providing a substrate,

coating on the substrate a layer (A) containing not less than 50% by weight of an aqueous alkali-soluble polymer containing, as a polymerization component, 10% by mol or more of a monomer effective to improve plate wear resistance and sensitivity,

coating a layer (B) containing not less than 50% by weight of an aqueous alkali solution-soluble resin having a phenolic hydroxyl group on the layer (A), and

drying the coated layer (B) by applying a high-pressure air flow or heat provided by a heating roll,

wherein at least one of layer (A) and layer (B) comprises at least one compound which generates heat upon absorbing light, and

wherein the layer (B) is laminated directly on the layer (A) formed on the substrate.

120. A positive type photosensitive image-forming material for use with an infrared laser according to claim 119, wherein layer (B) comprises at least one compound which generates heat upon absorbing light.

121. A positive type photosensitive image-forming material for use with an infrared laser according to claim 119, wherein at least one of layer (A) and layer (B) comprises an oil-soluble dye or basic dye selected from the group consisting of Oil Yellow #101, Oil Yellow #103, Oil Pink #312, Oil Green BG, Oil Blue BOS, Oil Blue

#603, Oil Black BY, Oil Black BS, Oil Black T-505, Victoria Pure Blue, Crystal Violet, Methyl Violet, Ethyl Violet, Rhodamine B, Malachite Green, and Methylene Blue.

122. A positive-type photosensitive image-forming material for use with an infrared laser according to claim 121, wherein said oil-soluble dye or basic dye is selected from the group consisting of Victoria Pure Blue, Crystal Violet, Methyl Violet, and Ethyl Violet.

123. A positive-type photosensitive image-forming material for use with an infrared laser, comprising:

a substrate;

a layer (A) containing not less than 50% by weight of an aqueous alkali-soluble polymer compound containing, as a polymerization component, 10% by mol or more of a monomer effective to improve plate wear resistance and sensitivity, and a material which generates heat upon absorbing light, and

a layer (B) containing not less than 50% by weight of an aqueous alkali solution-soluble resin having a phenolic hydroxyl group, said layer (B) being laminated directly on said layer (A) formed on said substrate.

124. A positive type photosensitive image-forming material for use with an infrared laser according to claim 123, wherein said layer (B) comprises at least one material which generates heat upon absorbing light.

125. A positive type photosensitive image-forming material for use with an infrared laser according to claim 123, wherein at least one of layer (A) and layer (B) comprises an oil-soluble dye or basic dye selected from the group consisting of Oil Yellow #101, Oil Yellow #103, Oil Pink #312, Oil Green BG, Oil Blue BOS, Oil Blue #603, Oil Black BY, Oil Black BS, Oil Black T-505, Victoria Pure Blue, Crystal Violet, Methyl Violet, Ethyl Violet, Rhodamine B, Malachite Green, and Methylene Blue.

126. A positive-type photosensitive image-forming material for use with an infrared laser according to claim 125, wherein said oil-soluble dye or basic dye is selected from the group consisting of Victoria Pure Blue, Crystal Violet, Methyl Violet, and Ethyl Violet.

127. A positive type photosensitive image-forming material for use with an infrared laser according to claim 104, wherein said compound which generates heat upon absorbing light is present in layer (B).

128. A positive type photosensitive image-forming material for use with an infrared laser according to claim 110, wherein said layer (B) further comprises a cyanine dye.